COMPUTER ACCESSORIES CORPORATION
849 WARD DRIVE ■ SANTA BARBARA, CALIFORNIA 93105
■ Telephone: (805) 964-1016 ■

July 2, 1966

TO: Mr. T. Nelson

Thank you for your inquiry. The literature you requested on our MCM-1 Magnetic Card Memory is enclosed.

This new device provides an on-line random access storage capacity of 100 million bits with a maximum access time of 50 milliseconds. Long-wearing flexible magnetic cards, contained in interchangeable cartridges, are used as the storage medium. A unique "brute force" method of card extraction, not dependent on gravity, combined with a simple method of card selection provides extremely rapid and reliable operation with a minimum of card handling.

A building-block system of pricing is used so that each unit can be equipped with the electronics required for each specific application. A typical MCM-1 completely equipped for serial recording (one channel of read/write electronics) costs less than .03 cents per bit.

Please let us know if you would like further information. Bulletins describing in greater detail the electrical and mechanical features of the MCM-1 and its interface characteristics are available on request.

Very truly yours,

R. E. Norris

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Marketing Manager

REN:e-

Enclosure

MODEL MCM-1 MAGNETIC CARD MEMORY*

- RANDOM ACCESS
- 100 MILLION BIT ON-LINE STORAGE CAPACITY
- 50 MILLISECOND MAXIMUM ACCESS TIME
- 5 CARDS PER SECOND MAXIMUM CYCLING SPEED
- PARALLEL PROCESSING OF UP TO 32 TRACKS
- 10.4 MEGABITS/SEC. MAXIMUM DATA RATE
- INTERCHANGEABLE MAGNETIC CARD CARTRIDGES

Models featuring increased storage capacity, faster access time and faster cycling speed are presently under development.

Designed and Produced by:

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*PATENT PENDING

REV 4/15/66

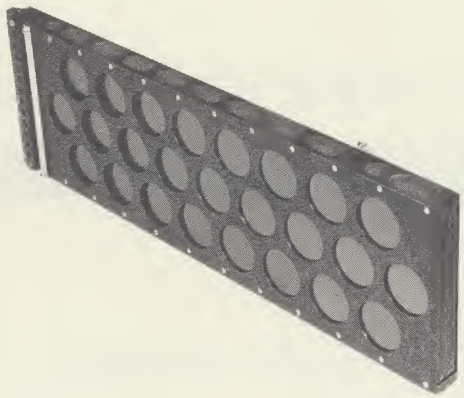
MODEL MCM-1 MAGNETIC CARD MEMORY

The MCM-1 Magnetic Card Memory is an economical, random access, random storage device using flexible magnetic cards as the storage medium. The unit provides an on-line storage capacity of up to 100 million bits with a maximum access time of 50 milliseconds. The magnetic cards are contained in a protective cassette which also serves as an interchangeable loading cartridge. While off-line, the cassettes are conveniently stored because of their flat rectangular form (approximately 16.5" by 0.875" by 5.0"). The standard cassette contains 64 magnetic cards and can be loaded or unloaded on the MCM-1 in less than 5 seconds.

The MCM-1 Magnetic Card Memory is truly a random access device. In addition, the machine uses a content address system and the cards in the cassette are randomly ordered. When a card is addressed, either by the interface address lines or by the control panel push buttons, the address information is stored by the machine internally. When the extract command is issued, the appropriate card is selected, extracted, and passed over the magnetic head for processing. This sequence takes place in less than 50 milliseconds. After processing, the card is returned to the cassette. Card handling is limited to the absolute minimum providing extremely long card life. Cards are easily replaced when necessary, however. Standard MCM-1 magnetic cards are 16" by 4.5" by .0075" with perforated selection holes on one edge. Cards used in certain other major card handling systems can be adapted for use in the MCM-1.

MAGNETIC CARDS

The MCM-1 Magnetic Card Memory is composed of a transport, two electronics chassis and one power supply chassis. The unit is housed in a sturdy, all-welded, self-supporting metal cabinet 6.5' high by 25" wide by 30" deep. Access to the transport section is provided by a door which includes a soundproof laminated glass window for visual inspection. The transport includes one cassette, a cassette carriage with latching mechanism, one magnetic head assembly with its moving mechanism, two capstans for card recirculation and a capstan for re-entry, card selection and extraction mechanisms, the synchronous motor, all prime mover solenoids and all card transporting belts, rollers, and gates. The electronics chassis contain all the read and write amplifiers, input coders and output decoders, deskewing buffers and logic processing circuits, and all the driver amplifiers for the prime mover solenoids. The power supply chassis contains the required power supplies and includes all the interlocking relays which safeguard the machine from improper sequencing.



MAGNETIC CARD CASSETTE

The system is completely self-supporting and operates on standard 115 v, 60 cycle power. All cooling is incorporated so that in normal computer applications no special or supplementary temperature control is required. In addition, by virtue of the extreme simplicity of the transport, reasonable air-tightness is maintained to exclude dust and other contaminants. This principle is carried to the cassettes also, which are equally effective in protecting the cards either in storage or during shipping.

The machine uses a single 32-track dual-gap magnetic head. Each track is either read only, or read 0.7 milliseconds after write. The distance between gaps is 0.280" and the cards move at a speed of 400"/sec. Depending on the users' requirements, any number of tracks can be processed simultaneously: From one track in the case of serial recording with a maximum data rate of 325Kbit/sec., to the full 32 tracks processed in parallel resulting in a maximum data rate of 10,400Kbit/sec. An individual preamplifier is connected to each of the 32 read magnetic heads to provide a satisfactory signal level before any signal switching occurs.

For the convenience of the programmer, or the user, each magnetic card is divided into 4 groups of 32 tracks each. Selecting tracks belonging to the same group is accomplished by electronic switching in less than 1 microsecond. Changing groups is accomplished by moving the head assembly either before the card is extracted from the cassette or, if in recirculation, during the time interval that it is not under the head. This is accomplished in less than 20 milliseconds. Since the standard card is 16" long and since the recirculation path, around the two capstans, is 24" (in order to accomodate the just-mentioned head movement, if any, together with the card's 16" length), the effective data rate in recirculation is 2/3 of the maximum data rate.

The MCM-1 Magnetic Card Memory can be furnished with the transport section alone, for use with customers' electronics, or it can be furnished as a complete system with from 1 to 32 write amplifiers and output amplifiers. Special versions also can be provided.

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June 29, 1966

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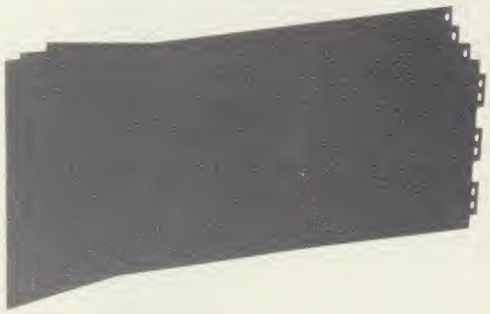

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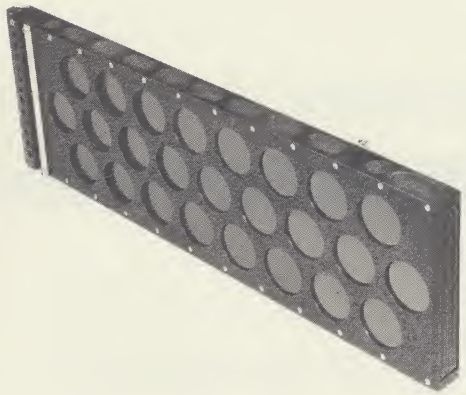

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